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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/623,576 | 07/22/2003 | Hao-Cheng Chen | 3722-0155P | 6545 |
| 2292 | 7590 | 09/08/2006 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | HALEY, JOSEPH R | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2627 | |

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,576

Applicant(s)

CHEN ET AL.

Examiner

Joseph Haley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-20 is/are rejected.
- 7) ☒ Claim(s) 2-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Minamino et al. (US 6657929).

In regard to claim 1, An ADIP demodulation apparatus, which is applied to an optical disk driver to generate ADIP information according to a wobble signal, the ADIP demodulation apparatus comprising (column 6 lines 42-47): a slicing unit for receiving the wobble signal and generating a wobble pulse by slicing the wobble signal (fig. 9 element 13); a phase locked loop for generating a reference wobble signal with the same frequency and phase as the wobble pulse according to the wobble pulse (fig. 9 element 14 see also column 12 lines 42-53); a channel bit generator for generating a channel bit signal according to the reference wobble signal and the wobble pulse (fig. 9 element 8); and a decoder for decoding to the ADIP information according to the channel bit signal (fig. 9 element 7, see also fig. 9 elements 9 and 10 which control the servo); wherein the channel bit generator produces the channel bit signal according to

a difference signal generated by comparing the phase of the reference wobble signal with the phase of the wobble pulse (fig. 9 element 15b).

Method claim 7 is drawn to the method of using the corresponding apparatus claimed in claim 1. Therefore method claim 7 corresponds to apparatus claim 1 and is rejected for the same reasons of anticipation as used above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-10 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minamino et al. in view of the applicant's admitted prior art.

In regard to claim 8-10, Minamino et al. teaches the elements of claims 8-10 except the ADIP information is a sync data when the channel bit signal sequence is a first sequence; the ADIP information is data 0 when the channel bit signal sequence is a second sequence; and the ADIP information is data 1 when the channel bit signal sequence is a third sequence.

The applicant's admitted prior art teaches the ADIP information is a sync data when the channel bit signal sequence is a first sequence; the ADIP information is data 0 when the channel bit signal sequence is a second sequence; and the ADIP information is data 1 when the channel bit signal sequence is a third sequence (paragraph 5 lines 8-11).

The two are analogous art because they both deal with the same field of invention of generating address information from wobble signals.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Minamino with the channel bit sequences of the admitted prior art. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Minamino with the channel bit sequences of the admitted prior art because using modulated data instead of single bits creates more accuracy in recording.

In regard to claims 15-20, the applicant's admitted prior art teaches wherein the first sequence is 11110000, the second sequence is 10000011 and the third sequence is 10001100 (paragraph 5 lines 8-11).

Claims 11-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Minamino et al. in view of Guisante et al. (US 6265919).

In regard to claims 11-14, Minamino et al. teaches all the elements of claims 11-14 except wherein the PLL is an XOR gate.

Guisante et al. teaches wherein the PLL is an XOR gate (see fig. 1 see also column 1 line 33).

The two are analogous art because they both deal with the same field of invention of phase locked loops.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Minamino et al. with an XOR PLL. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of

Minamino et al. with an XOR PLL because XOR circuits are small, cheap and have low power usage.

Response to Arguments

Applicant's arguments filed 5/23/06 have been fully considered but they are not persuasive.

Applicant argues on page 9, 3rd paragraph and page 10, 1st paragraph, that Minamino et al. does not teach the use of ADIP information. However as shown in fig. 4 and column 10 lines 1-16, Minamino et al. teaches creating address information based on a wobble signal, which is ADIP information.

Applicant argues on page 10, paragraph 2, that the channel bit generator of the present invention does not perform the same functions as the formatter in Minamino et al. However, the examiner maintains this rejection because the formatter of Minamino et al. produces information based on a wobble signal and a wobble reference pulse.

On page 11, paragraph 1, applicant argues that "the function and structure of the decoder of the present application differ from those of the recording pulse generation circuit 7 in Minamino et al.". However, the examiner maintains this rejection because along with the RISC processing section and system controller the recording pulse generation circuit controls the operation of the optical system which includes moving the pickup to particular addresses.

Allowable Subject Matter

Claims 2-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The prior art fails to teach a counter for counting the width of high level of the difference signal corresponding to each wobble pulse using a counting clock and outputting a count value.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takahashi (US 2003/0086348) teaches counters to determine whether or not the wobble signal is correct.

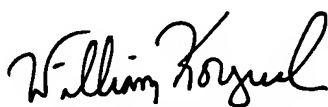
Eom (US 2003/0198164) teaches reducing detection errors in wobble signals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Haley whose telephone number is 571-272-0574. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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WILLIAM KORZUCH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600